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(54) NEW SULFONIUM SALT AND CHEMICAL AMPLIFICATION POSITIVE RESIST MATERIAL (57) Abstract:

PROBLEM TO BE SOLVED: To obtain the subject new compound suitable as a component of a chemical amplification positive resist material having high resolution and suitable for fine processing technology. SOLUTION: This new compound is a sulfonium salt expressed by the formula (R1 is an alkyl, an alkoxy or a dialkylamino; OR2 is an acidunstable group; Y is a 2-20C straight, branched or cyclic alkyl, an arylsulfonate, etc.; (n) is an integer of 0-2; (m) isaninteger of 1-3; n+m is 3; (r) is an integer of 1-5; (p) is an integer of 0-5; (q) is an integer of 0-4; q +r is an integer of 1-5), having at least one acid-unstable group on the phenyl group in the molecule and having an alkyl or arylsulfonate group substituted with a straight, branched or cyclic electron-attracting group, e.g. 2,2,2-trifluoroethanesulfonic acid (4-tbutoxyphenyl) diphenylsulfonium salt. The compound forms a chemical amplification positive resist material together with an organic solvent, an alkali-soluble resin and an acid generating agent.

$$\left(\begin{array}{c} Y \\ (R')_{r} \end{array}\right)_{n} \left(\begin{array}{c} Y \\ (R')_{q} \end{array}\right)_{n}$$

LEGAL STATUS

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